REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

The specification and abstract have been reviewed and revised to make a number of editorial revisions. Due to the number of changes involved, a substitute specification and abstract have been prepared and are submitted herewith. No new matter has been added. Enclosed is a marked-up copy of the original specification and abstract labeled **"Version with Markings to Show Changes Made"** indicating the same changes incorporated into the substitute specification and abstract.

Proposed drawing amendments to Figures 2, 7, 9 and 10 are submitted herewith under a separate cover letter. These drawing amendments are editorial in nature and do not add new matter to the application. In addition, new formal drawings incorporating these amendments are submitted concurrently.

The Examiner has indicated that Figure 6 should be labeled as "Prior Art." However, the Applicants respectfully traverse this requirement. Nowhere in the present application is Figure 6 disclosed as being prior art. In fact, Figure 6 is discussed in the "Description of the Preferred Embodiments" section of the application as illustrating how the present invention suppresses the formation of mist. (See page 18, line 33 - page 19, line 12). Further, it is improper for an Examiner to arbitrarily indicate that a portion of the specification is prior art without providing any justification whatsoever as evidence of the determination. As a result, it is apparent that Figure 6 does not represent prior art and the requirement of the Examiner to label Figure 6 as such is requested to be withdrawn.

Claims 1-4, 6-8, 17, 18 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Kobayashi et al. ('299). Claims 9, 11-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. ('299) in view of Applicants' admitted prior art (AAPA). Claims 21 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi et al. ('299) in view of Barrett et al. ('191). Claim 5, 10, 15, 19 and 20 have been indicated as containing allowable subject matter. The Applicants wish to express their gratitude for this indication of allowable subject matter.

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Claims 1-23 have been cancelled and are replaced with new claims 24- 46, respectively. In addition, new claims 47-50 have been added.

New claims 24-50 have been drafted to make a number of editorial revisions. These revisions have been made to place the claims in better U.S. form. None of these revisions have been made to narrow the scope of protection of the claims, nor to address issues related to patentability and therefore, these revisions should not be construed as limiting the scope of equivalents of the claimed features offered by the Doctrine of Equivalents.

The above-mentioned rejections are respectfully traversed and are submitted to be inapplicable to the new claims for at least the following reasons.

Newly added independent claim 24 is patentable over Kobayashi, relied upon by the Examiner, since claim 24 recites an ink-jet recording apparatus having a flushing signal generating unit operable to generate a flushing signal, and a recording head provided with a nozzle, the recording head being operable to jet ink particles through the nozzle based on the flushing signal, wherein the flushing signal causes the recording head to jet ink particles through the nozzle so that each of the ink particles is a main ink particle. Kobayashi fails to disclose a flushing signal generating unit operable to generate a flushing signal that causes a recording head to jet ink particles through a nozzle such that each of the ink particles is a main ink particle.

Kobayashi discloses an ink-jet recording apparatus with a flushing control means 30 that is operable to move recording heads 7 and 8 via a printing control means 20 to a flushing position, normally a position opposite caps 12 and 13 of a capping device 11. Once the recording heads 7 and 8 are moved into the flushing position, the flushing control means causes a predetermined number of ink droplets to be ejected from all of the nozzle openings of the recording heads 7 and 8 to prevent clogging of the nozzles. (See column 4, lines 24-38). However, Kobayashi fails to disclose that the ink droplets ejected from the nozzle openings of the recording heads 7 and 8 are main ink particles as recited in claim 24. An advantage of ejecting main ink particles is that they resist the tendency to form a mist of ink particles that can contaminate the ink-jet recording apparatus as a whole, thereby reducing the ink-jet recording apparatus' print quality. As a result, Kobayashi fails to disclose the invention as recited in claim 24.

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In item 7 on page 7 of the Office Action, the Examiner contends that Barrett discloses a fan for preventing the temperature of a recording apparatus from increasing. However, even if the Examiner contention is accurate, Barrett provides no suggestion of the above-discussed feature of claim 24.

Newly added independent claim 29 is patentable over Kobayashi, relied upon by the Examiner, since claim 29 recites an ink-jet recording apparatus having a flushing signal generating unit operable to generate a flushing signal, and a recording head provided with a nozzle, the recording head being operable to jet ink particles through the nozzle based on the flushing signal, wherein the flushing signal causes the recording head to jet ink particles through the nozzle so that each of the ink particles has a momentum greater than a predetermined value. Kobayashi fails to disclose a flushing signal generating unit operable to generate a flushing signal that causes a recording head to jet ink particles through a nozzle such that each of the ink particles has a momentum greater than a predetermined value.

Kobayashi discloses an ink-jet recording apparatus with a flushing control means 30 that is operable to move recording heads 7 and 8 via a printing control means 20 to a flushing position, normally a position opposite caps 12 and 13 of a capping device 11. Once the recording heads 7 and 8 are moved into the flushing position, the flushing control means causes a predetermined number of ink droplets to be ejected from all of the nozzle openings of the recording heads 7 and 8 to prevent clogging of the nozzles. (See column 4, lines 24-38). However, Kobayashi fails to disclose that the ink droplets ejected from the nozzle openings of the recording heads 7 and 8 have a momentum greater than a predetermined value as recited in claim 29. An advantage of ejecting ink particles that have a momentum greater than a predetermined value is that they resist the tendency to form a mist of ink particles that can contaminate the ink-jet recording apparatus as a whole, thereby reducing the ink-jet recording apparatus' print quality. As a result, Kobayashi fails to disclose the invention as recited in claim 29.

In item 7 on page 7 of the Office Action, the Examiner contends that Barrett discloses a fan for preventing the temperature of a recording apparatus from increasing. However, even if the Examiner contention is accurate, Barrett provides no suggestion of the above-discussed feature of claim 29.

Newly added independent claim 34 is patentable over Kobayashi in view of AAPA, relied upon by the Examiner, since claim 34 recites an ink-jet recording apparatus having a flushing signal generating unit operable to generate a flushing signal, and a recording head provided with a nozzle, the recording head being operable to jet ink particles through the nozzle based on the flushing signal, wherein the flushing signal causes the recording head to intermittently jet the ink particles through the nozzle so that the ink particles include sets of a main ink jet particle and minute ink jet particles after the main ink particle, and the minute ink jet particles of a previous set combine with the main ink jet particle of a following set in a range of a predetermined distance from the nozzle. The combination of Kobayashi and AAPA fails to disclose a flushing signal generating unit operable to generate a flushing signal that causes a recording head to intermittently jet ink particles through a nozzle such that the ink particles include sets of a main ink jet particle and minute ink jet particles after the main ink particle, and the minute ink jet particles of a previous set combine with the main ink jet particle of a following set in a range of a predetermined distance from the nozzle.

Again, Kobayashi discloses an ink-jet recording apparatus with a flushing control means 30 that is operable to move recording heads 7 and 8 via a printing control means 20 to a flushing position, normally a position opposite caps 12 and 13 of a capping device 11. Once the recording heads 7 and 8 are moved into the flushing position, the flushing control means causes a predetermined number of ink droplets to be ejected from all of the nozzle openings of the recording heads 7 and 8 to prevent clogging of the nozzles. (See column 4, lines 24-38). However, as admitted by the Examiner, Kobayashi fails to disclose that the ink droplets ejected from the nozzle openings of the recording heads 7 and 8 are intermittently jetted through a nozzle such that the ink particles include sets of a main ink jet particle and minute ink jet particles after the main ink particle, and that the minute ink jet particles of a previous set combine with the main ink jet particle of a following set in a range of a predetermined distance from the nozzle, as recited in claim 34.

The Examiner then indicates that the AAPA discloses these features. However, as discussed above, Figure 6 and the disclosure of page 18, line 33 - page 19, line 12 are not prior

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art. As a result, Figure 6 and the disclosure of page 18, line 33 - page 19, line 12 cannot be used to reject claim 34.

Since it is apparent that Kobayashi fails to disclose the above-mentioned features of claim 34 and since Figure 6 and the disclosure of page 18, line 33 - page 19, line 12 are not prior art, the combination of Kobayashi and AAPA fails to disclose the invention as recited in claim 34.

In item 7 on page 7 of the Office Action, the Examiner contends that Barrett discloses a fan for preventing the temperature of a recording apparatus from increasing. However, even if the Examiner contention is accurate, Barrett provides no suggestion of the above-discussed feature of claim 34.

Because of the above mentioned distinctions, it is believed clear that claims 24-50 are allowable over the references relied upon by the Examiner. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 24-50. Therefore, it is submitted that claims 24-50 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

Kazuhiko HARA et al.

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By: David M Ovedovitz

David M. Ovedovitz
Registration No. 45,336
Attorney for Applicants

DMO/asd/krl
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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